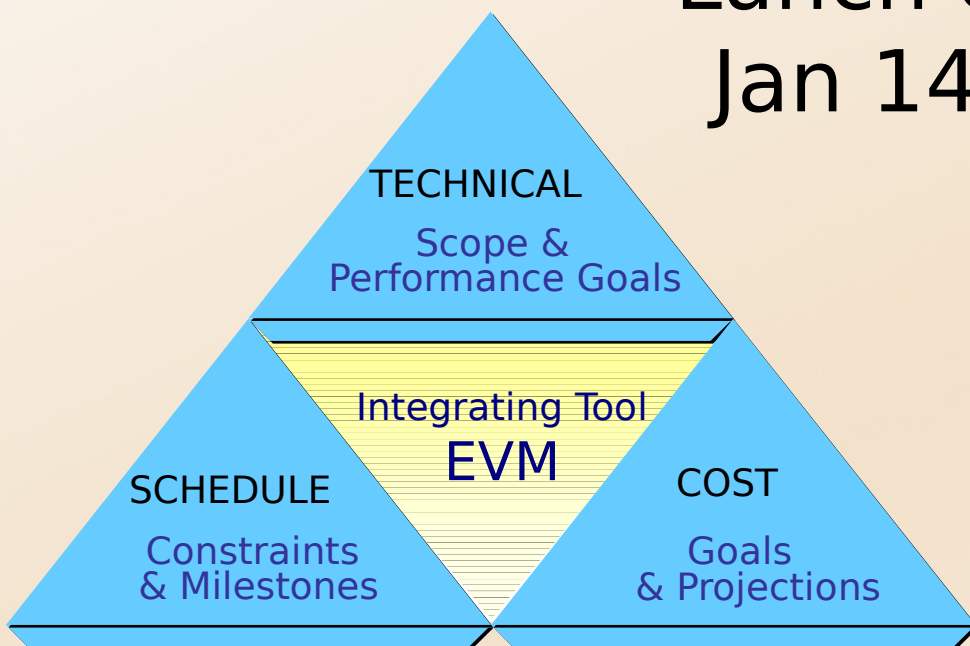


Earned Value Management (EVM) Fundamentals

Lunch & Learn
Jan 14, 2015

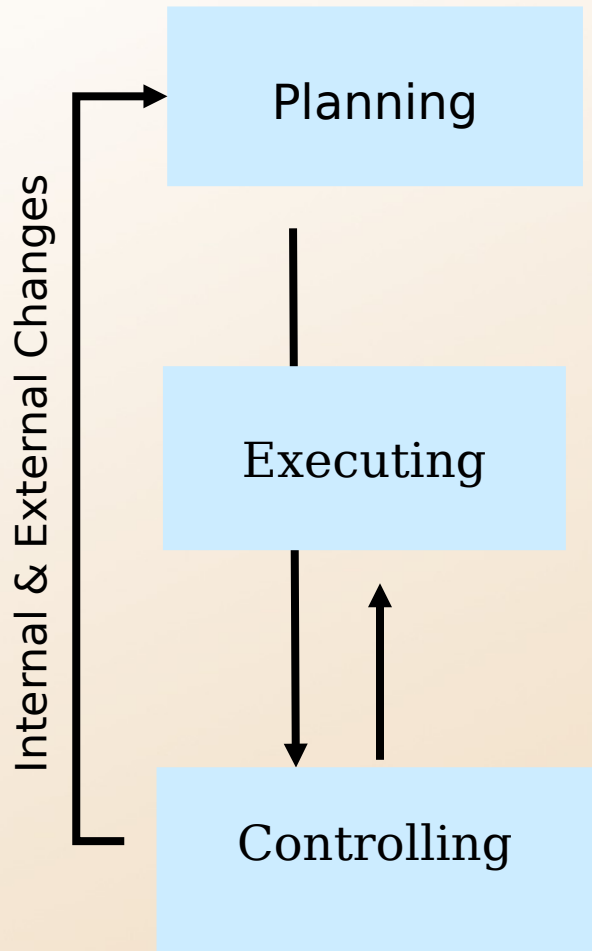


Presented by:
Defense Acquisition
University
Joel Little
Joel.Little@dau.mil



The EVM Process

- Integrated Program Management -



- An Integrated Plan Is Established (PMB)
 - *Work Is Defined, Scheduled, and Resources Are Allocated to Lowest Level for Execution*
 - *Risks Are Identified (the IBR Process)*
 - *Risk Management Plan Established*
- Budgets Are “Earned” As Work Is Completed (*Earned Value*)
- Actuals Are Accumulated (ACWP)
- Status Provided Against Baseline (PMB)
- Variances Are Isolated (Cost/Schedule Drivers)
 - *Early Warning*
- Management Actions
 - *Corrective Action Identified & Implemented*
 - *Changes Are Implemented & Controlled*
- Final Estimated Cost & Schedule are Forecast



DoDI 5000.02 EVM Policy Guidance

Table 8. EVM Requirements

REQUIREMENTS	WHEN REQUIRED	SOURCE
For Cost/Incentive Contracts ¹ ≥ \$50 Million ²		
• Compliance with EVM system guidelines in ANSI/EIA-748 ⁵	At contract award and throughout contract performance	Part 7 of Reference (c) This instruction
• EVM system formally validated and accepted by cognizant contracting officer	At contract award and throughout contract performance	
• Integrated Program Management Report (DI-MGMT-81861 ³)	Monthly	
• Integrated Baseline Reviews	Within 180 calendar days after contract award, exercise of options, and major modifications	
For Cost/Incentive Contracts ¹ ≥ \$20 Million ² but < \$50 Million ²		
• Compliance with EVM system guidelines in ANSI/EIA-748 ⁵ (no formal EVM system validation)	At contract award and throughout contract performance	Part 7 of Reference (c) This instruction
• Integrated Program Management Report (DI-MGMT-81861 ³) (tailoring of formats recommended)	Monthly	
• Integrated Baseline Reviews	Within 180 calendar days after contract award, exercise of options, and major modifications	
For Cost/Incentive Contracts ¹ < \$20 Million ²	At the discretion of the Program Manager based on cost-benefit analysis	Part 7 of Reference (c) This instruction
• Integrated Program Management Report, Format 6 (DI-MGMT-81861 ³)	At the discretion of the Program Manager based on Government requirements	
For Firm Fixed-Price Contracts ¹ regardless of dollar value	Limited Use—will be approved by the MDA based on a business case analysis	Part 7 of Reference (c) This instruction
• Integrated Program Management Report, Format 6 (DI-MGMT-81861 ³)	At the discretion of the Program Manager based on Government requirements	
Notes:		
1. The term, "Contracts," includes contracts, subcontracts, intra-government work agreements, and other agreements. "Incentive" contracts include fixed-price incentive.		
2. Application thresholds are in then-year dollars.		
3. DI-MGMT-81861 = Data Item Description: Integrated Program Management Report (Reference (az))		
4. EVM shall be applied to cost/incentive Indefinite Delivery/Indefinite Quantity contracts at the task order level. For each task order follow the above table.		
5. ANSI/EIA-748 = American National Standards Institute (ANSI)/Electronic Industries Alliance (EIA) Standard 748, Earned Value Management Systems (Reference (ba)).		

Contracts ≥ \$50M TY

- Compliance with 32 EVMS Guidelines
- Formal EVM system validation
- Contract Performance Report*
- Integrated Master Schedule*
- Baseline Reviews
- Ongoing surveillance

Contracts ≥ \$20M but < \$50M TY

- Compliance with 32 EVMS Guidelines
- No Formal EVM system validation
- Contract Performance Report (tailored)*
- Integrated Master Schedule (tailored)*
- Integrated Baseline Reviews

Contracts < \$20M TY

- EVM optional (risk-based decision)
- Cost-benefit analysis required

* Integrated Program Management Report replaces CPR and IMS on RFPs issued after 1 July 2012 ([AT&L Memo, Jun 19 2012](#))

Contracts -- Cost/Incentive contracts, subcontracts, intra-government work agreements. EVM Discouraged on FFP.
EVMIG also discourages EVM when nature of work is LOE or Time & Material.



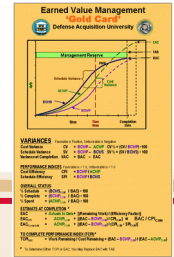
Section I - General Provisions

- FAR Clauses – July 2006
 - FAR 52.234-2 – Notice of EVMS – Pre-Award IBR
 - FAR 52-234-3 – Notice of EVMS – Post Award IBR
 - FAR 52-234-4 – EVMS – The Gov will conduct an IBR if a pre-award IBR has not been conducted.
 - DFARS Section 234.203 – Solicitation provisions & contract clause (Dec 2011)
 - Use the provision at DFARS 252.234-7001, Notice of Earned Value Management System, instead of the provisions at FAR 52.234-2 and FAR 52.234-3 in the solicitation
 - Use the clause at DFARS 252.234-7002, Earned Value Management System, instead of the clause at FAR 52.234-4 in the solicitation and contract.
 - Use DFARS 252.242-7005, Contractor Business Systems, to allow for withholding payments due to non-compliant EVMS issue
 - Includes links to procedures on performing cost benefit analyses and waiver
- DoD Contracts will NOT use FAR Clauses for EVM**



Section J - Exhibits/Attachments

- Work Breakdown Structure - MIL-STD-881 mandatory common WBS for CPR, IMS, IPMR & CCDRs through WBS Level 3
- EVM Related Data Item Descriptions (DIDs)
 - Contract Performance Report DI-MGMT-81466A
 - Integrated Master Schedule DI-MGMT-81650
- **Integrated Program Management Report DI-MGMT-81861**
(Supersedes CPR & IMS DIDs effective July 1, 2012)
- FM & Cost Related Data Item Descriptions (DIDs)
 - Contract Work Breakdown Structure DI-MGMT-81334D
 - Contract Funds Status Report DI-MGMT-81468A
 - Cost and Software Data Reports DI-FNCL-81565C thru 81567C
- Contract Data Requirements List (CDRL) places CPR & IMS on contract
- EVM CDRLs can and should be tailored within bounds of policy
 - Tailoring options are limited for contracts \geq \$50M
 - Most aspects are tailorable for contracts $<$ \$50M
- Consider all risk factors when tailoring EVM DIDs
 - Type of contract (determined by cost risk)
 - Technology
 - Schedule
 - Past contractor performance



QUESTION

ANSWER

ACRONYM

How Much Work Should Be Done?

Budgeted Cost For Work Scheduled
The Plan

BCWS

How Much Work Is Done?

Budgeted Cost For Work Performed Or
Earned Value

BCWP

How Much Did The Completed Work Cost?

Actual Cost Of Work Performed

ACWP

What Was The Total Job Supposed To Cost?

Budget At Completion

BAC

What Do We Now Expect The Total Job To Cost?

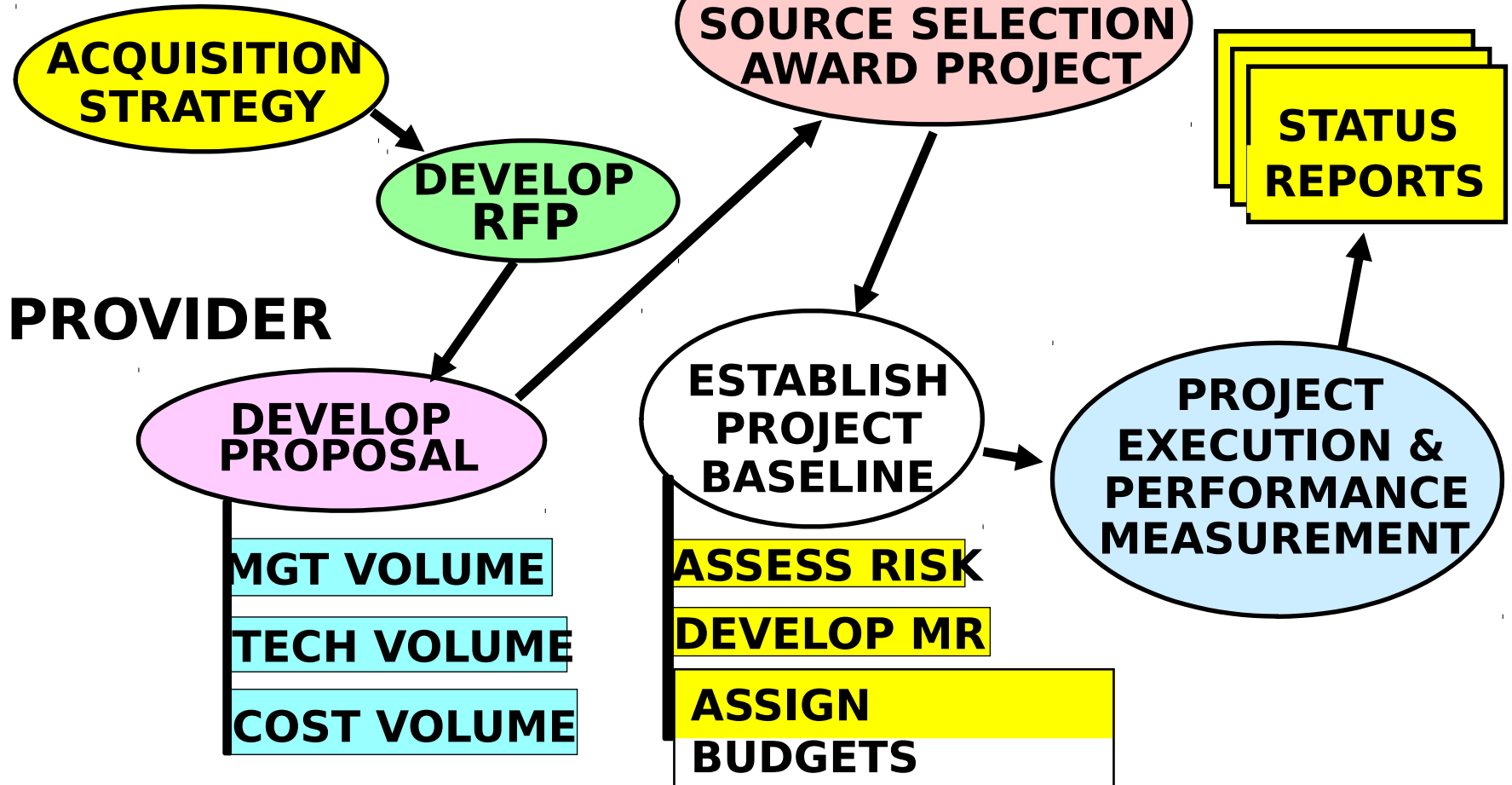
Estimate At Completion

EAC

Where does it all start?

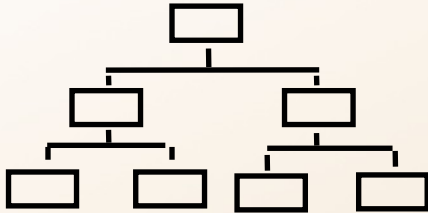
Earned Value Management within the Contracting Process

GOVERNMENT



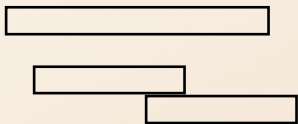
PMB Development Steps

Step 1. Define the Work Scope



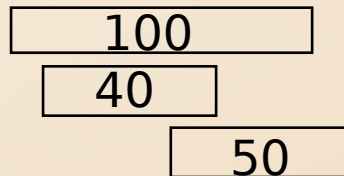
- Identify the scope of work
- Plan the work at the control account / work package level

Step 2. Schedule the Work



- Arrange the work packages in order
- Schedule work packages

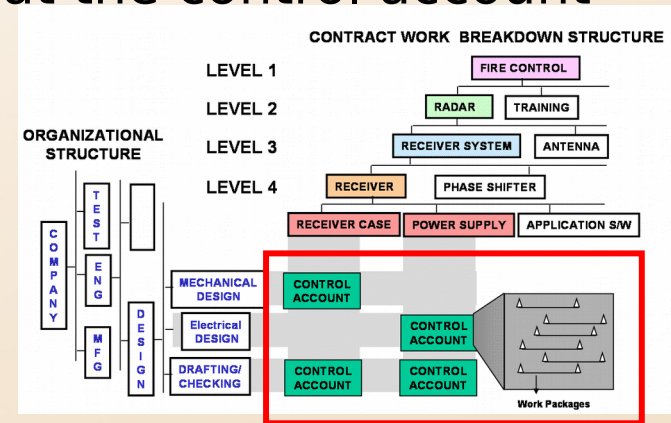
Step 3. Allocate Budgets to Schedule



- Classify the work and select an EV technique
- Budget the work packages
- Spread the budget over time
- Calculate cumulative BCWS

The Control Account

- All earned value is accomplished at the control account
 - BCWS is established
 - BCWP is determined
 - ACWP is collected
 - Variances are assessed
 - Estimates are revised
 - Workaround plans are devised



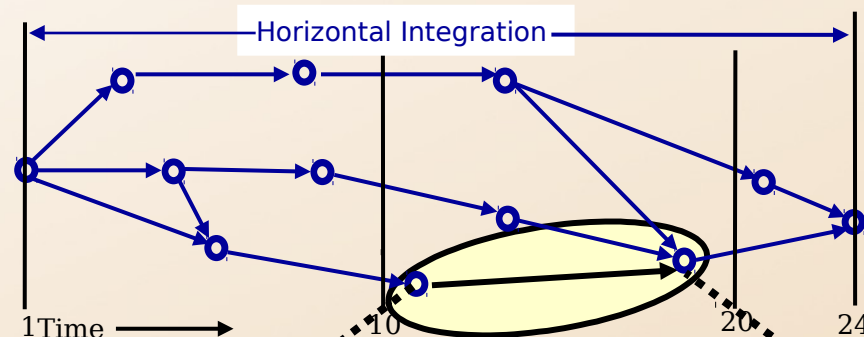
- In IPT organization structures, the control account may be tied to an IMP Significant Accomplishment or Accomplishment Criteria.
- ANSI Definition - A management control point at which budgets (resource plans) and actual costs are accumulated and compared to earned value for management purposes. A control account is a natural management point for planning and control since it represents the work assigned to one responsible organizational element on one program work breakdown structure element.



Schedule Integration

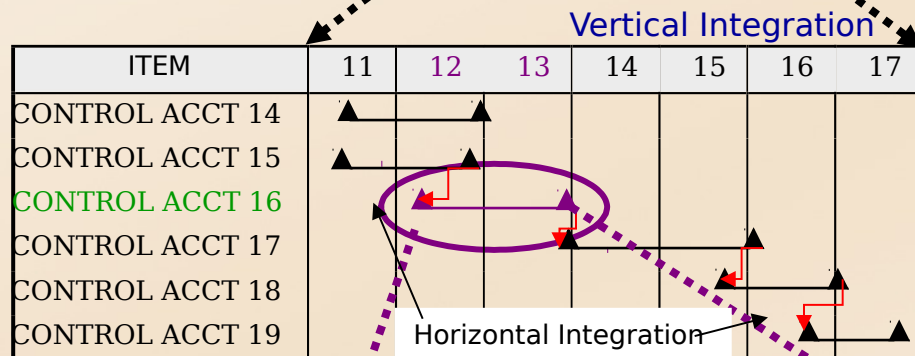
MASTER SCHEDULE

- Single Top Program Level Schedule
- Schedules IMP Program Elements
- Schedules Program and Contract Milestones
- Horizontally Integrated - Depicts task relationships among IMP Program Elements and Milestones



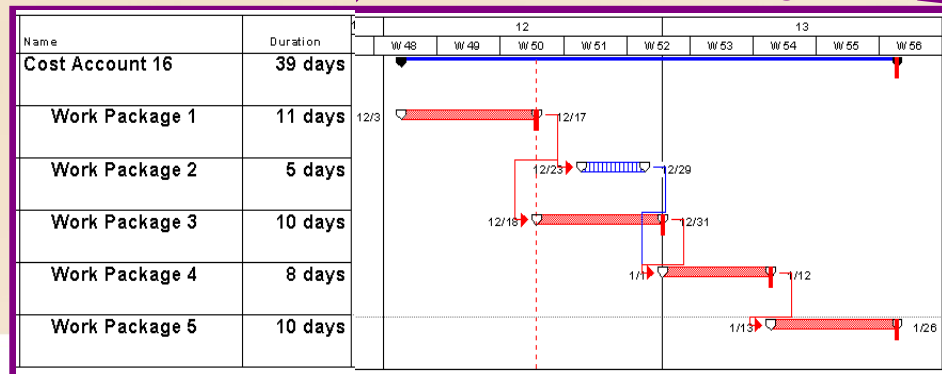
INTERMEDIATE LEVEL SCHEDULE

- Subordinate to Master Schedule scheduling a single or a limited number of Program Elements
- Schedules Associated EVMS Control Accounts
- Schedules IMP Significant Accomplishment Milestones
- Horizontally Integrated - Depicts task relationships among control accounts & significant accomplishments
- Vertically Integrated - All schedule elements completed in time allocated to associated Program Level Element



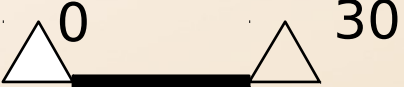

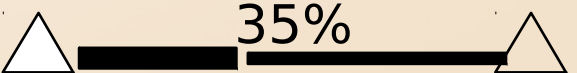

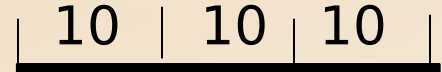

DETAIL LEVEL SCHEDULE

- Control Account Schedule
- Schedules IMP Accomplishment Criteria Milestones
- Horizontally Integrated - Depicts task relationships among Work Packages & Accomplishment Criteria
- Vertically Integrated - All detailed schedule work packages completed in time allocated to control account





Earned Value Techniques

<u>METHOD</u>	<u>LENGTH</u>	<u>BCWP CALCULATION</u>
0 / 100 %	1 Mth	
50 / 50 %	2-3 Mths	
% Complete	Varies	
Variant Milestone	3 or More Mths	
Level of Effort	Varies	
Apportioned Effort	Varies	



Result: Time Phased PMB

Total Allocated Budget

Management Reserve

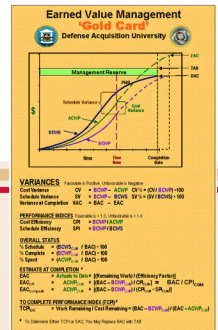
BAC

\$

Time

Completion Date

Timephased BAC = PMB =
BCWS_{CUM}

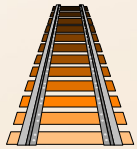




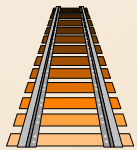
Example -- *Without Earned Value*

- Contract: 4 Miles of Railroad Track in 4 Mos for \$4K
- Status: After 3 Mos Only \$2K Spent of \$3K Planned
- Question: How are You Doing and How Do You Know?

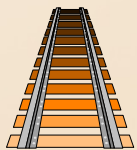
Planned Work \$3K



Month 1 @ \$1K



Month 1 @ \$1K



Month 1 @ \$1K

Actual Costs \$2K

Labor
\$1K

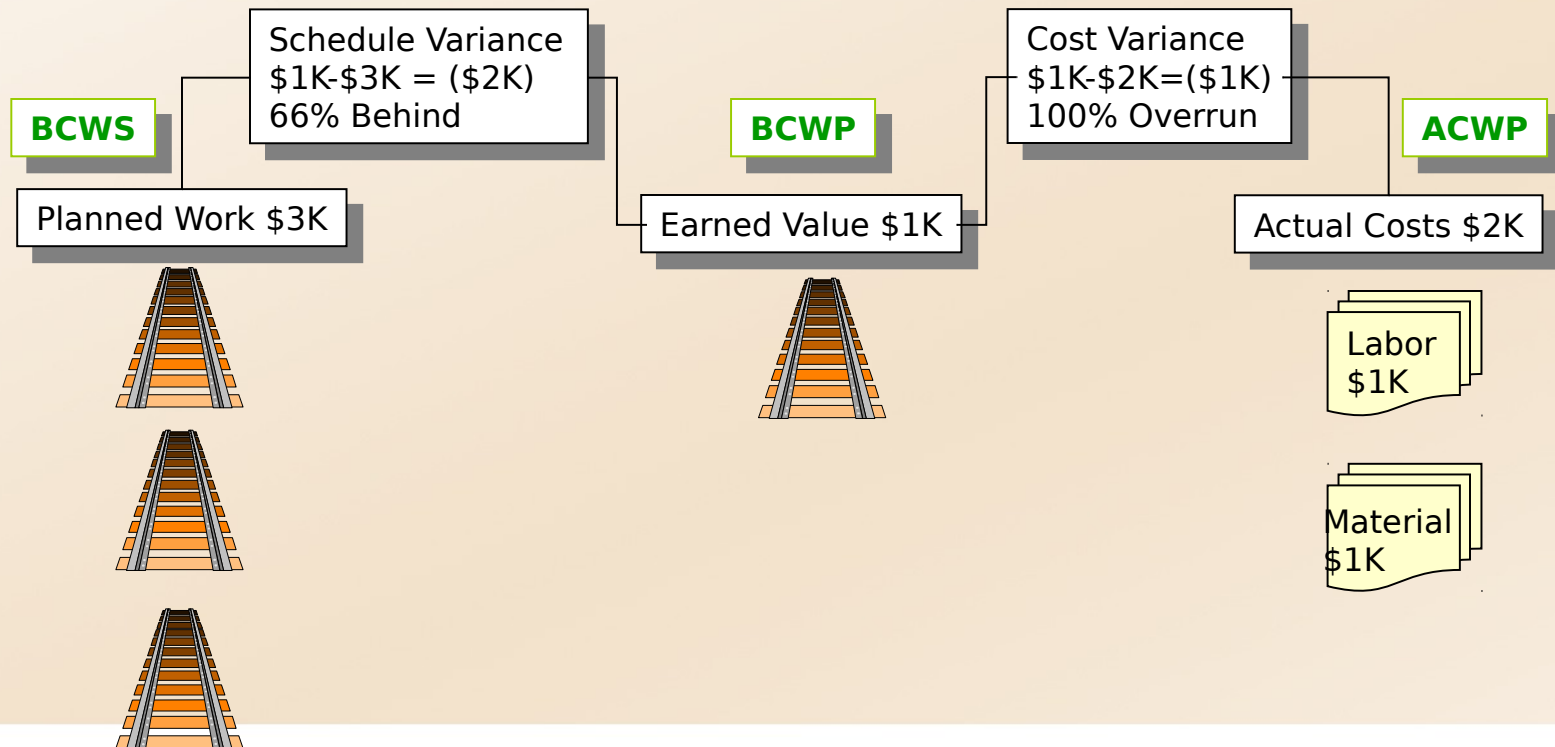
Material
\$1K





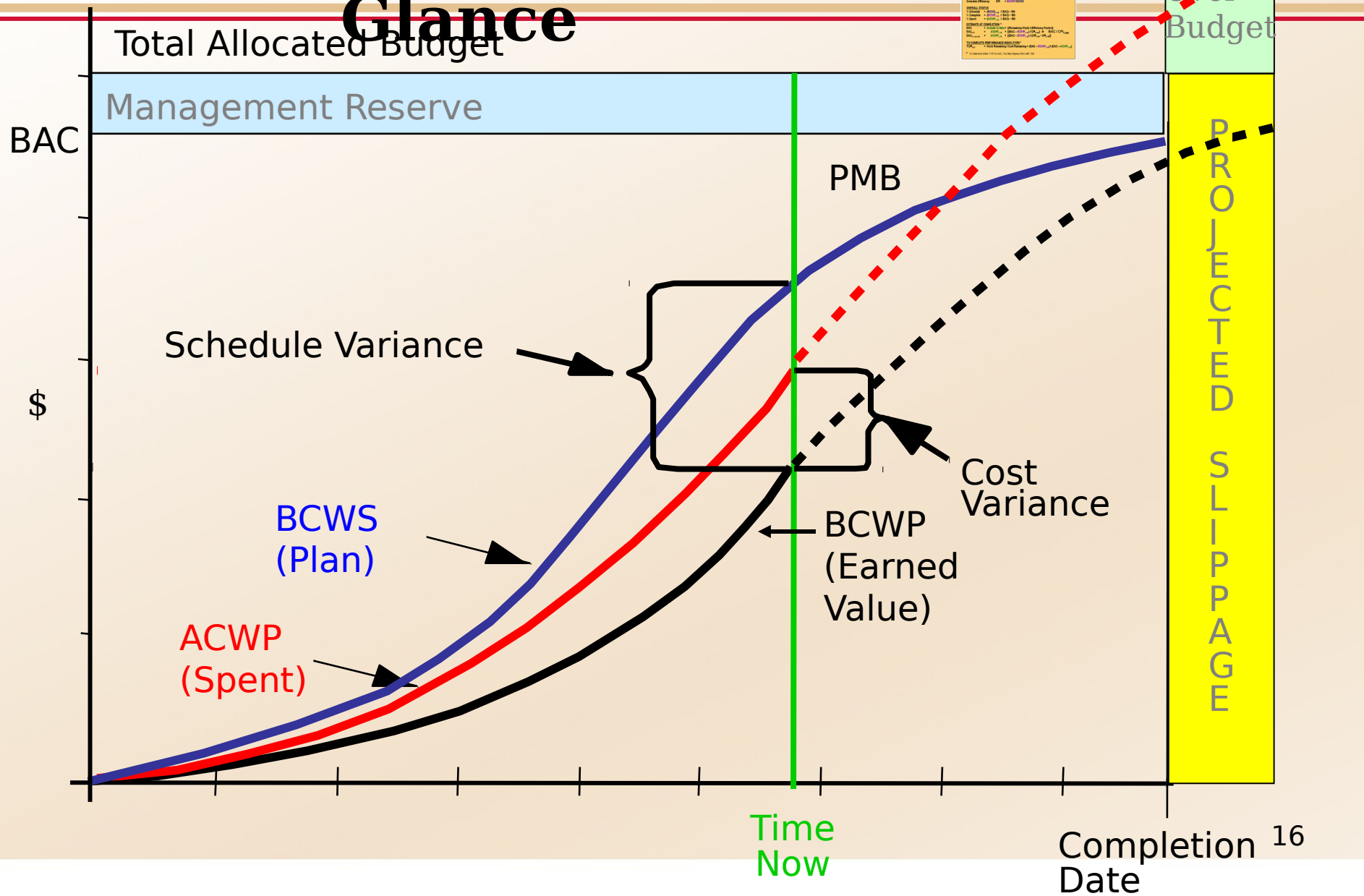
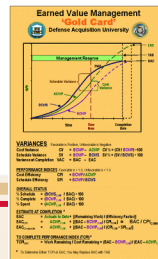
Example -- *With Earned Value*

- Contract: 4 Miles of Railroad Track in 4 Mos for \$4K
- Status: After 3 Mos Only 1 Mile of Track is Complete yet \$2M Spent
- Question: What Would You Tell the PM?





Program at a Glance





General EVM Report Tailoring

- IPMR Tailoring Guidance
 - Format 1 & 2 Reporting Levels
 - Reporting Frequency
 - Submission Dates
 - Date of first and last reports
 - Format 5 variance reporting thresholds
 - Fixed Number of Variances
 - Percentage or Dollar Thresholds
 - Specific Variances
 - Contractor format
 - Electronic data interchange format
- IMS Tailoring Guidance
 - Degree of networking
 - Reporting Frequency
 - Submission Dates
 - Date of first and last reports
 - Frequency of schedule risk analysis
 - Electronic data interchange format



Integrated Program Management Report (IPMR)

- Format 1 – Work Breakdown Structure (WBS)
- Format 2 – Organizational Breakdown Structure (OBS)
- Format 3 – Baseline Data
- Format 4 – Manpower Data
- Format 5 – Variance Analyses
- Format 6 – Integrated Master Schedule
- Format 7 – Historical Data (BCWS, BCWP, ACWP, BAC, EAC, etc)

EVM provides an Objective means by which to Evaluate Contract Performance and predict the Future based on risk



Sample IPMR - Format 1

Unclassified

CLASSIFICATION (When Filled In)

CONTRACT PERFORMANCE REPORT FORMAT 1 - WORK BREAKDOWN STRUCTURE										DOLLARS IN THOUSANDS					FORM 1 REQUIRED																		
Boxes 1 - 4										Key Contract & Contractor Data																							
1. CONTRACTOR		2. CONTRACT		3. PROGRAM		4. LOCATION (Address and ZIP Code)		5. NUMBER		6. PHASE		7. TO (YYYYMMDD)																					
a. NAME Inceda, Corp		a. NAME LAR DEC 2003		a. NAME LAR Vehicle		b. LOCATION (Address and ZIP Code) 1000 W Hollywood St Los Angeles, CA 90293		b. NUMBER DAAR01-03-C-0076		b. PHASE SDD		b. TO (YYYYMMDD) 20031231																					
6. TYPE		d. SHARE RATIO		e. EVMS ACCEPTANCE																													
CPIF		50/50 30/70		NO YES X (YYYYMMDD) 19850519																													
8. QUANTITY		9. ESTIMATED COST OF AUTHORIZED		10. TARGET PROFIT/		11. TARGET		12. ESTIMATED		13. CONTRACT		14. NEW OTB/OTS Box		15. DATE OF OTB/OTS																			
400/4		UNPRICED WORK		FEE		PRICE		PRICE		CBUING				(YYYYMMDD)																			
		\$64,711.5		\$7,700 / 11.9%		\$72,412.2		\$70,801.80		\$75,475.7																							
16. ESTIMATED COST AT COMPLETION		17. CONTRACT BUDGET		18. VARIANCE		19. AUTHORIZED CONTRACTOR REPRESENTATIVE		20. TITLE		21. SIGNATURE		22. BUDGET AND EAC Data		23. DATE																			
MANAGEMENT ESTIMATE		BASE				First, Middle Initial		LAR Program M		Pop I Smith				20040115																			
AT COMPLETION		(2)		(3)																													
a. BEST CASE		\$39,512.6																															
b. WORST CASE		\$64,711.5																															
c. MOST LIKELY		\$63,378.7		\$64,711.5		\$1,332.8																											
Box 8		CURRENT PERIOD										CUMULATIVE TO DATE										REPROGRAMMING ADJUSTMENTS			AT COMPLETION								
ITEM		BUDGETED COST		ACTUAL COST		VARIANCE		BUDGETED COST		ACTUAL COST		VARIANCE		BUDGETED COST		ACTUAL COST		VARIANCE		BUDGETED COST		ACTUAL COST		VARIANCE		BUDGETED COST		ACTUAL COST		VARIANCE			
(1)		(2)		(3)		(4)		(5)		(6)		(7)		(8)		(9)		(10)		(11)		(12a)		(12b)		(13)		(14)		(15)		(16)	
a. WORK BREAKDOWN STRUCTURE ELEMENT		BCWS		BCWP		ACWP		SV		CV		BCWS		BCWP		ACWP		SV		CV						BAC		EAC		VAC			
1.1 PRIME VEHICLE		1,722.7		1,353.1		1,775.0		-369.6		-421.9		6,829.2		5,874.0		6,410.3		-955.2		-536.3						36,317.4		36,187.8		129.6			
1.1.1 FRAME		139.8		116.1		119.1		-23.7		-3.0		492.5		430.8		478.7		-61.7		-47.9						2,709.7		2,708.8		0.9			
1.1.2 SUSPENSION/STR		390.8		279.4		352.4		-111.4		-73.0		1,346.2		1,019.4		1,149.0		-326.8		-129.6						8,114.0		8,117.2		-3.2			
1.1.3 POWER PACKAGE		518.1										1,346.2		1,019.4		1,149.0		-326.8		-129.6						11,661.5		11,653.5		108.0			
1.1.4 AUXILIARY AUTO		6.3										1,346.2		1,019.4		1,149.0		-326.8		-129.6						283.5		283.5		0.0			
1.1.5 ARMAMENT		297.1										1,346.2		1,019.4		1,149.0		-326.8		-129.6						4,159.5		4,161.7		-2.2			
1.1.6 BODY/CAB		300.0										1,346.2		1,019.4		1,149.0		-326.8		-129.6						3,887.2		3,851.2		36.0			
1.1.7 COMMUNICATIONS		50.5										1,346.2		1,019.4		1,149.0		-326.8		-129.6						1,927.7		1,937.2		-9.5			
1.1.8 INTEG & ASSEM		20.1										1,346.2		1,019.4		1,149.0		-326.8		-129.6						3,574.3		3,574.7		-0.4			
1.2 SYS PROGRAM MGT		295.7										1,346.2		1,019.4		1,149.0		-326.8		-129.6						15,843.4		15,823.2		20.2			
1.3 SYS TEST & EVAL		0.0										1,346.2		1,019.4		1,149.0		-326.8		-129.6						2,492.3		2,492.3		0.0			
1.4 TRAINING		0.0										1,346.2		1,019.4		1,149.0		-326.8		-129.6						0.0		0.0		0.0			
1.5 SYS DATA		17.7										1,346.2		1,019.4		1,149.0		-326.8		-129.6						846.3		846.3		0.0			
1.6 PEC SUPT EQUIP		0.0										1,346.2		1,019.4		1,149.0		-326.8		-129.6						1,410.7		1,410.7		0.0			
1.9 SPARES & REP		0.0		0.0		0.0		0.0		0.0		1,346.2		1,019.4		1,149.0		-326.8		-129.6						5,707.3		5,707.3		0.0			
b. COST OF MONEY		15.2		12.5		39.0		-2.7		-26.5		151.0		149.0		162.2		-2.0		-13.2						821.8		821.8		0.0			
c. GENERAL AND ADMINISTRATIVE		148.2		121.0		192.6		-27.2		-71.6		1,450.6		1,437.7		1,558.4		-12.9		-120.7						8,462.7		8,450.8		11.9			
d. UNDISTURBED BUDGET																										0		0		0			
e. SUBTOTAL (PERFORMANCE MEASUREMENT BASELINE)		2,051.3		1,598.2		2,131.7		-453.1		-533.5		11,346.3		10,064.7		10,887.6		-1,281.6		-822.9						63,439.2		63,289.4		149.8			
f. MANAGEMENT RESERVE																																	
g. TOTAL		2,051.3		1,598.2		2,131.7		-453.1		-533.5		11,346.3		10,064.7		10,887.6		-1,281.6		-822.9						64,711.5							
h. RECONCILIATION TO CONTRACT BUDGET BASE																																	
i. VARIANCE ADJUSTMENT																		0.0		0.0													
j. TOTAL CONTRACT VARIANCE																		-1,281.6		-822.9						64,711.5		63,289.4		1,422.1			
FORM 1-04-05																																	

Unclassified

CLASSIFICATION (When Filled In)



Sample IPMR - Format 2

Unclassified

CLASSIFICATION (When Filled In)

CONTRACT PERFORMANCE REPORT FORMAT 2 - ORGANIZATIONAL CATEGORIES											DOLLARS IN THOUSANDS			FORM APPROVED OMB No. 0704-0188		
<small>The public reporting burden for this collection of information is estimated to average .6 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information, including suggestions for reducing the burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Project Collection (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Send comments to this collection of information through Washington Headquarters Services, Directorate for Information Operations and Reports, (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Project Collection (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. PLEASE DO NOT RETURN YOUR FORM TO THIS ADDRESS. SUBMIT COMPLETED FORMS IN ACCORDANCE WITH CONTRACTUAL REQUIREMENTS.</small>																
1. CONTRACTOR			2. CONTRACT				3. PROGRAM				4. REPORT PERIOD					
a. NAME Increda, Corp			a. NAME LAR DEC 2003				a. NAME LAR Vehicle				a. FROM (YYYYMMDD) 20031129					
b. LOCATION (Address and ZIP Code) 1000 W Hollymolly St Los Angeles, CA 90293			b. NUMBER DAAH01-03-C-0076				b. PHASE SDD				b. TO (YYYYMMDD) 20031231					
			c. TYPE CPIF		d. SHARE RATIO 50/50 30/70		e. EVMS ACCEPTANCE NO YES X (YYYYMMDD) 19850519									
5. PERFORMANCE DATA																
ITEM (1)	CURRENT PERIOD					CUMULATIVE TO DATE					REPROGRAMMING ADJUSTMENTS			AT COMPLETION		
	BUDGETED COST		ACTUAL COST	VARIANCE		BUDGETED COST		ACTUAL COST	VARIANCE					BUDGETED (14)	ESTIMATED (15)	VARIANCE (16)
	WORK SCHEDULED (2)	WORK PERFORMED (3)	WORK PERFORMED (4)	SCHEDULE (5)	COST (6)	WORK SCHEDULED (7)	WORK PERFORMED (8)	WORK PERFORMED (9)	SCHEDULE (10)	COST (11)	COST VARIANCE (12a)	SCHEDULE VARIANCE (12b)	BUDGET (13)			
a. ORGANIZATIONAL CATEGORY																
2A - PROGRAM OFFICE	167.0	167.0	155.4	0.0	11.6	1,090.5	1,090.5	901.0	0.0	189.5				5,009.4	5,009.4	0.0
2B - PROGRAM CONTROL	109.5	109.5	72.6	0.0	36.9	645.8	645.8	483.2	0.0	162.6				2,191.6	2,191.6	0.0
2C - SUPPORT SERVICE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				1,252.3	1,252.3	0.0
2D - MANUFACTURING	375.7	375.7	405.9	0.0	-30.2	1,351.3	1,351.3	1,378.6	0.0	-27.3				18,785.2	18,785.2	0.0
2E - QUAL ASSURANCE	37.5	37.5	45.0	0.0	-7.5	135.1	135.1	140.3	0.0	-5.2				1,878.5	1,878.5	0.0
2F - PROCUREMENT	392.6	392.6	382.3	0.0	10.3	1,894.7	1,894.7	1,876.7	0.0	18.0				11,897.3	11,747.5	149.8
2G - ENGINEERING	953.6	503.3	1,031.7	-450.3	-528.4	6,077.8	4,798.4	5,945.8	-1,279.4	-1,147.4				21,603.0	21,603.0	0.0
b. COST OF MONEY	15.2	12.5	39.0	-2.7	-26.5	151.0	149.0	162.2	-2.0	-13.2				821.8	821.8	0.0
c. GENERAL AND ADMINISTRATIVE	148.2	121.0	192.6	-27.2	-71.6	1,450.8	1,437.7	1,558.4	-12.9	-120.7				8,462.7	8,450.8	11.9
d. UNDISTRIBUTED BUDGET														0	0	0
e. SUBTOTAL (PERFORMANCE MEASUREMENT BASELINE)	2,051.3	1,598.2	2,131.7	-453.1	-533.5	11,346.3	10,064.7	10,887.6	-1,281.6	-822.9				63,439.2	63,289.4	149.8
f. MANAGEMENT RESERVE														1,272.30		
g. TOTAL	2,051.3	1,598.2	2,131.7	-453.1	-533.5	11,346.3	10,064.7	10,887.6	-1,281.6	-822.9				64,711.5		

DD FORM 2734/2, JAN 05

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Sample IPMR - Format 3

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CLASSIFICATION (When Filled In)

CONTRACT PERFORMANCE REPORT FORMAT 3 - BASELINE										DOLLARS IN THOUSANDS				FORM APPROVED			
Boxes 1 - 4										Key Contract & Contractor Data							
1. CONTRACTOR a. NAME Inreda, Corp			2. CONTRACT a. NAME LAR DEC 2003			3. PROGRAM a. NAME LAR Vehicle			4. TO (YYYY MMDD) 20031231								
b. LOCATION (Address and ZIP Code) 1000 W Hollywood St Los Angeles, CA 90293			b. NUMBER DAAR01-03-C-0076			b. PHASE SDD			b. TO (YYYY MMDD) 20031231								
c. TYPE CPIF			d. SHARE RATIO 50/50 30/70			c. EVMS ACCEPTANCE NO YES X (YYYYMMDD) 19850519											
5. CONTRACT DATA																	
a. ORIGINAL NEGOTIATED COST			b. NEGOTIATED			c. CURRENT NEGOTIATED COST (a. + b.)			d. ESTIMATED COST OF AUTHORIZED UNPRICED WORK			e. CONTRACT BUDGET BASE (e. + d.)		f. TOTAL ALLOCATED BUDGET		g. DIFFERENCE (e. - f.)	
						\$64711.5			\$0.0			\$64,711.5		\$64,711.5		\$0.0	
h. CONTRACT START DATE (YYYYMMDD) 20030602			i. CONTRACT DEFINITION DATE (YYYYMMDD) 20030610			j. PLANNED COMPLETION DATE (YYYYMMDD) 20060530			k. CONTRACT COMPLETION DATE (YYYYMMDD) 20060531			l. ESTIMATED COMPLETION DATE (YYYYMMDD) 20060530					
6. PERFORMANCE DATA																	
Box 6		ITEM (1)	BCWS CUMULATIVE TO DATE (2)	BCWS FOR REPORT PERIOD (3)	BUDGETED COST FOR WORK SCHEDULED (BCWS) (Not Cumulative)								UNCLASSIFIED		TOTAL BUDGET		
					SIX MONTH FORECAST						ENTER SPECIFIED PERIODS					TC	
					JAN (4)	FEB (5)	MAR (6)	APR (7)	MAY (8)	JUN (9)	FY04 (10)	FY05 (11)	(12)	(13)	(14)		(15)
		a. PERFORMANCE MEASUREMENT BASELINE (Beginning of Period)	9,295.0	2,095.5	1,742.3	1,793.8	1,800.8	1,762.5	1,803.7	1,830.1	5,202.2	20,452.3	0.0	0.0	15,679.3	0.0	63,457.5
		b. BASELINE CHANGES AUTHORIZED DURING REPORT PERIOD															
		c. PERFORMANCE MEASUREMENT BASELINE (End of Period)	11,346.3		2,224.5	1,777.3	1,757.4	1,750.4	1,777.4	1,775.0	5,408.2	19,626.5	0.0	0.0	15,996.1	0.0	63,439.1
		7. MANAGEMENT RESERVE															1,272.3
		8. TOTAL															64,711.4

DD FORM 27348, JAN 05

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Sample IPMR – Format 5

Unclassified

CLASSIFICATION (When Filled In)

CONTRACT PERFORMANCE REPORT FORMAT 5 - EXPLANATIONS AND PROBLEM ANALYSES			
Boxes 1 - 4			
<small>The public reporting burden for this collection of information is estimated to average 36 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Project Collection (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Project Collection (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. PLEASE DO NOT RETURN YOUR FORM TO THIS ADDRESS. SUBMIT COMPLETED FORMS IN ACCORDANCE WITH THE INSTRUCTIONS.</small>			
1. CONTRACTOR		2. CONTRACT	
a. NAME Increda, Corp		a. NAME LAR DEC 2003	
b. LOCATION (Address and ZIP Code) 1000 W Hollymolly St Los Angeles, CA 90293		b. NUMBER DAAR01-03-C-0076	
		c. TYPE CPIF	d. SHARE RATIO 50/50 30/70
		e. EVMS ACCEPTANCE NO YES X (YYYYMMDD) 19850519	
		b. TO (YYYYMMDD) 20031129	
		b. TO (YYYYMMDD) 20031231	

Key Contract
& Contractor
Data

Box 5

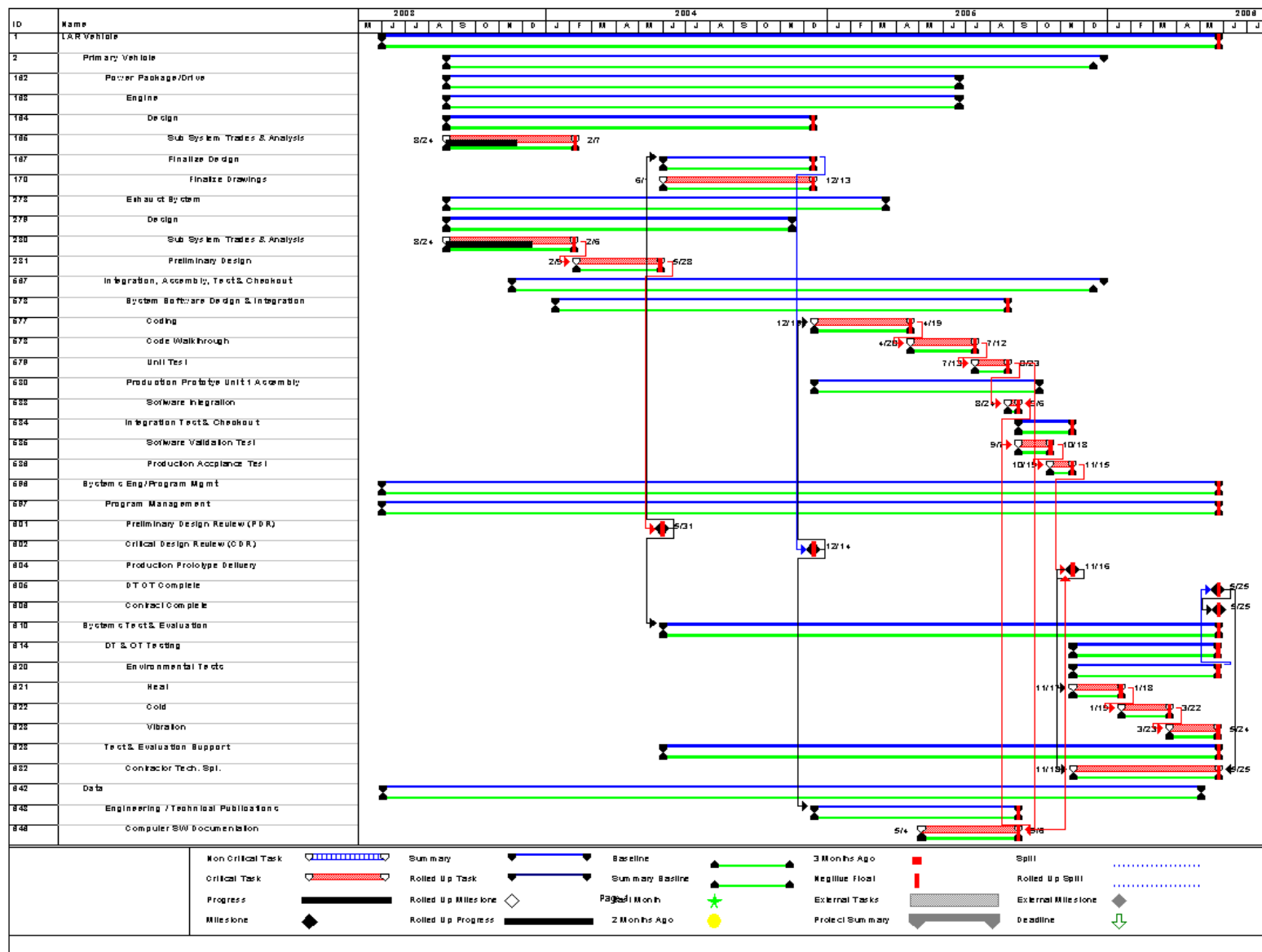
Discussion should include but is not limited to:

- Summary Analysis
 - Summary of Overall Contract Variances
 - Changes in Management Reserve
 - Changes in Undistributed Budget
 - Differences between EAC's (Blocks 6.a, 6.b, 6.c, or Block 8.15) (Format 1)
 - Significant timephasing shifts in Baseline (BCWS) (Format 3)
 - Significant timephasing shifts or Overall Changes in Forecasted Staffing (Format 4)
 - Discussion of Over Target Baseline and/or Over Target Schedule incorporation
- Analysis of Significant Variances: (identify and describe each)
 - Type and Magnitude of Variance
 - Explanation of Significant Reasons
 - Effect on Immediate Task
 - Effect on Total Contract
 - Corrective Actions Taken or Planned

Format 5 is a narrative report used to explain significant cost and schedule variances and other identified contract problems and topics. It is mandatory for all EVMS contracts. Research has indicated that two thirds of the costs associated with EVMS can be attributed to variance analysis reporting.



Sample IPMR - Format 6



TRN or XML/UNCFACT Format containing:

Historical data (BCWS, BCWP, ACWP, BAC, etc...

Future data (ETC, EAC, etc...



Performance Data Analysis Objectives

- Determine Current Status (Top Drivers)
 - Where Are We Today?
- Identify Trends
 - Where Are We Headed?
 - Any Cost, Schedule Surprises?
- Forecast The Future (EAC Realism)
 - What Is The EAC (Cost & Price)?
 - What Is The Impact On The Budget?
- Indicate Areas For Management Action
 - What Should We Do Now?

Challenge – Turning Data Into Meaningful Information for Decision Makers



Estimate at Completion (EAC)

- What Will Be The Final Cost? -

- Definition: Actual Cost To Date + Estimated Cost Of Work Remaining ($ACWP + ETC = EAC$)
- Contractor Develops Comprehensive EAC At Least Annually ("Grass Roots Method" - $ACWP + ETC = EAC$)
 - Should Examine On Monthly Basis
- EAC Considerations:
 - Performance To Date
 - Impact Of Approved Corrective Action Plans
 - Known/Anticipated Problems
 - Best Estimate Of Cost To Complete Remaining Work
- Statistical Formulae Method - Three Elements:
 - Budgeted Cost Of Work Remaining ($BAC - BCWP$)
 - Projected Performance Efficiency



EAC Realism

- **Common Performance Factor Methods**
- **TCPI = To Complete Performance Index Efficiency Necessary To Complete - Either On Budget (BAC) Or On The (EAC).**

$$TCPI_{(BAC)} = \frac{\text{Work Remaining}}{\text{Cost Remaining}} = \frac{BAC - BCWP}{BAC - ACWP}$$

- **$TCPI_{(BAC)} = \text{Work Remaining} / \text{Cost Remaining}$**
- **$TCPI_{(BAC)} = (\$4k - \$1K) / (\$4k - \$2K) = \$3K / \$2K = 150\%$**
- **Compare CPI & TCPI to Assess Realism Of Future Performance - "Reality Check"**
 - **$TCPI = 150\%$ while $CPI = 50\%$**
 - ***They are earning \$0.50 on the dollar spent, and their performance will have to improve to earning \$1.50 per dollar spent for the remainder of the contract.***

*If TCPI > CPI by .05, Then Question EAC
If TCPI >or< CPI by .10 Then OSD TW
tripped*



Summary

- Earned Value Management is required by Law, OMB Circular A-11 policy guidance, and DoDI 5000.2
- EVM is the most comprehensive program management tool
- Senior DOD and Congressional Leaders use it to make program decisions
- Management involvement ensures EVM data is used in a proactive manner to manage programs and make timely corrective action decisions

EVM helps you identify risk, ask the right questions and make sound decisions to Keep Programs on Track.

Questions?